CLAIMS

1. Method for detecting the presence or the risk of developing an encaphalopathy in a mammal, comprising determining the presence, in a biological sample from the mammal, of a target molecule selected in the group consisting of :

a) a nucleic acid comprising a sequence selected from SEQ ID NO: 1-26 or a fragment thereof containing at least 5, preferably 6, 7, 8, 9 or 10 consecutive bases,

b) a nucleic acid having a sequence complementary to a sequence according to a),

c) a functional analogue of a nucleic acid according to a) or b) originating from another species or a natural variant, or

d) a polypeptide coded by a nucleic acid according to a) to c),

the presence of said target molecule in the sample being an indication of the presence or the risk of developing an encephalopathy in said mammal.

2. Method according to claim 1, comprising determining (simultaneously) the presence of at least 2, 3, 4, 5, 6, 7, 8, 9, 10 or more target molecules.

3. Method according to any one of claims 1 or 2, comprising detecting the presence or the absence of a nucleic acid according to a) to c) by selective hybridization or selective amplification.

4. Method according to any one of claims 1 or 2, comprising detecting the presence or the absence of a polypeptide according to d) by means of a specific antibody or a fragment or derivative of same.

5. Method according to claim 1, for detecting the presence or the risk of developing BSE in a bovine, comprising determining the presence, in a biological sample from the bovine, of one or more target molecules selected in the group consisting of :

a) a nucleic acid comprising a sequence selected from SEQ ID NO: 1-26 or a fragment thereof containing at least 5, preferably 6, 7, 8, 9 or 10 consecutive bases,

b) a nucleic acid having a sequence complementary to a sequence according to a),

c) a polypeptide coded by a nucleic acid according to a) or b).

6. Method for detecting the presence or the risk of developing BSE in a bovine or ovine, comprising contacting a biological sample from the bovine or ovine containing nucleic acids with a product comprising a support on which is immobilized at least one nucleic acid comprising a sequence selected from SEQ ID NO: 1-26, a fragment thereof containing at least 5 consecutive bases, or a nucleic acid having a sequence complementary thereto, and determining the hybridization profile, the profile indicating the presence or the risk of developing BSE in the bovine or ovine.

7. Use of a nucleic probe specific of a target nucleic acid such as defined in claim 1, said probe comprising from 5 to 400 bases, for *in vitro* detection of an encephalopathy in a subject.

8. Use of a nucleic primer allowing the amplification of all or part of a target nucleic acid such as defined in claim 1, said primer being single-stranded, having a length comprised between 5 and 50 bases, for *in vitro* detection of an encephalopathy in a subject.

9. Product comprising a support on which is immobilized at least one nucleic acid comprising a sequence selected from SEQ ID NO: 1-26.

10. Product comprising a support on which is immobilized at least one polypeptide coded by a nucleic acid comprising a sequence selected from SEQ ID NO: 1-26.

11. Kit comprising a compartment or container containing at least one nucleic acid comprising a sequence selected from SEQ ID NO: 1-26.

12. Use of a nucleic acid comprising a sequence selected from SEQ ID NO : 1-26, or a fragment thereof containing at least 5 consecutive bases, or a nucleic acid having a sequence complementary thereto, or a functional analogue thereof originating from another

species or a natural variant, for *in vitro* detection of an encephalopathy in a mammalian subject.